CLAIMS

I/we claim:

1. A method of Quality of Service Signaling in a system for cable telephony using one or more packet data networks, comprising the steps of:

a. encrypting, at an Internet Protocol Digital Terminal, a Dynamic Quality of Service signaling message; and

b. transmitting a signaling message including said encrypted Dynamic Quality of Service signaling message to a Broadband Telephony Interface.

2. A method of Quality of Service Signaling in a system for cable telephony using one or more packet data networks, comprising the steps of:

a. receiving, at a Cable Modem Termination System, a signaling message including an encrypted Dynamic Quality of Service signaling message from a Broadband Telephony Interface in connection with a request to change access by said Broadband Telephony Interface to network resources;

b. attempting to decrypt said encrypted Dynamic Quality of Service signaling message; and

c. controlling access by said Broadband Telephony Interface to network resources in accordance with the results of said decryption attempting step.

3. A method of Quality of Service Signaling in a system for cable telephony using one or more packet data networks, comprising the steps of:

a. encrypting, at an Internet Protocol Digital Terminal, a Dynamic Quality of Service signaling message using an encryption key;

b. transmitting a signaling message including said encrypted Dynamic Quality of Service signaling message from said Internet Protocol Digital Terminal to a Broadband Telephony Interface;

c. transmitting a signaling message including said encrypted Dynamic Quality of Service signaling message from said Broadband Telephony Interface to

a Cable Modem Termination System in connection with a request to change access by said Broadband Telephony Interface to network resources;

d. attempting to decrypt said encrypted Dynamic Quality of Service signaling message in said Cable Modem Termination System using a decryption key; and

e. controlling access by said Broadband Telephony Interface to network resources in accordance with the results of said decryption attempting step.

4. The method of claim 3, wherein said encrypted Dynamic Quality of Service signaling message transmitted in step (b) is part of a Create Connection (CRCX) or Delete Connection (DLCX) message.

5. The method of claim 3, wherein said encrypted Dynamic Quality of Service signaling message transmitted in step (c) is part of a Dynamic Service Addition Request (DSA-REQ) or Dynamic Service Delete Request (DSD-REQ) message.

6. The method of claim 3, wherein said encryption key is a private encryption key and said decryption key is a public encryption key for use in a system of public key cryptography.

7. The method of claim 3, further comprising the step of distributing said keys via a secure communication channel.

8. The method of claim 3, further comprising the step of generating said keys by operating on a seed value with an algorithm.

9. A method of Quality of Service Signaling in a system for cable telephony using one or more packet data networks, comprising the steps of:

a. receiving, at a Broadband Telephony Interface, a signaling message from an Internet Protocol Digital Terminal including an encrypted Dynamic Quality of Service signaling message; and

b. transmitting a signaling message including an encrypted Dynamic Quality of Service signaling message from said Broadband Telephony Interface to

a Cable Modem Termination System in connection with a request to change access by said Broadband Telephony Interface to network resources.

10. The method of claim 9, wherein said encrypted Dynamic Quality of Service signaling message received in step (a) is part of a Create Connection (CRCX) or Delete Connection (DLCX) message.

11. The method of claim 9, wherein said encrypted Dynamic Quality of Service signaling message transmitted in step (b) is part of a Dynamic Service Addition Request (DSA-REQ) or Dynamic Service Delete Request (DSD-REQ) message.